

Forma **annulata** (Clute), stat. nov. *R. hirta*, var. *annulata* Clute, l. c. (1913).

Forma **viridiflora** (Burnham), comb. nov. *R. hirta*, f. *viridiflora* Burnham, op. cit. xxii. 151 (1916).

Forma **homochroma** (Steyerm.), comb. nov. *R. hirta*, f. *homochroma* Steyerm. in RHODORA xl. 179 (1938).

Forma **pleniflora** (Moldenke), comb. nov. *R. hirta*, f. *pleniflora* Moldenke in Phytologia, ii. 320 (1947).

Many other forms doubtless occur. In this connection the statement from Clute is illuminating: "The original plant, with a blotch of red at the base of each ray-flower, is known as *Rudbeckia hirta pulcherrima*. Another form . . . is *R. h. rubra*. Still others . . . *R. h. annulata* . . . *R. h. tubuliforme* . . . and *R. h. flavescens* . . . The longer one works with *Rudbeckia hirta*, the clearer it becomes that the botanical species consists of a large number of elementary forms."—Clute in Am. Botanist, xxx. 159 (1924).

CHONDRILLA NUDICAULIS L. Mant. Alt. 278 (1771). This species is cited by Linnaeus as having its "*Habitat in America septentrionali; ad pyramides aegypti*". The plant is, as earlier recognized, *Lannaea nudicaulis* (L.) Hook. f. of Mediterranean regions and not known in America.

(To be continued)

SIX ADDITIONS TO THE ADVENTITIOUS FLORA OF QUEBEC

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The purpose of the present communication is to furnish fuller detail on five introduced species which the authors are responsible for inclusion in Prof. Ernest ROULEAU's recently published "*Supplément à la Flore laurentienne*" (64 pp., Institut Botanique, Université de Montréal. 1947). They are *Bromus tectorum* L., *Cynosurus cristatus* L., *Alliaria officinalis* Andrz., *Epilobium hirsutum* L. and *Thladiantha dubia* Bunge. Mention of the occurrence of a sixth, *Centaurea montana* L., is made here for the first time.

In June 1945, the senior author observed a number of patches of BROMUS TECTORUM L., a European grass of common occur-

rence in New England, growing alongside the Canadian Pacific Railroad line running through St. Jean (St. Jean Co.). Some time later, Frère ROLLAND-GERMAIN located another stand at Laval des Rapides (Laval Co.), near Montreal. The authors now report a third station found, in August 1945, at St. Joseph de la Rive, in distant Charlevoix County, where the brome-grass thrives as a railroad-side weed. With as many stations to its credit to date, *Bromus tectorum* L. may well be included with the flora adventitious to Quebec.

CYNOSURUS CRISTATUS L., belonging to the same family, provides still another addition. To the authors' knowledge no record exists at present reporting the appearance of the dog's-tail grass in Quebec. However, in the Marie-Victorin Herbarium, there is, and has been for a number of years now, a specimen collected by MARIE-VICTORIN & al. at Baie de Gaspé (Gaspé Co.), in 1923. Last summer, interest in its occurrence in the province was revived when it was discovered, during the recent foray of the Botanical Society of America in August, growing in marked abundance in a wet pasture at Duchesnay (Portneuf Co.). The odd-looking grass with its dense, stiff, spikelike panicles proved somewhat of a puzzle to a number of those seeing it for the first time before Dr. Jason SWALLEN recognized it on sight. Naturalized from the Old World a number of years ago, its present range of distribution in North America extends from Newfoundland, Quebec and Nova Scotia to Michigan, southward to Virginia, and westward to Oregon and Washington.

ALLIARIA OFFICINALIS Andrz., the third introduction, on the other hand, belongs to an altogether different family. In an old record (Ott. Nat. 12: 163. 1898), James M. MACOUN states that the crucifer, "Not before recorded from the province of Quebec", was found at the Cove, Quebec city, by Mrs. BRODIE. The senior author first came across the species growing in Iberville (Iberville Co.) and imparted the information to Bernard BOIVIN who incorporated it in a report published some time ago (Contrib. Inst. Bot. Univ. de Montréal 44: 37-38. 1942). The plants have increased in number since the colony was first noted and have now invaded an adjoining waste field and a neglected garden. A new station was described early last summer by Dr.

Risto TUOMIKOSKI, of Finland, and the junior author of the present note. Plants of the officinal species of *Alliaria* bordered the sidewalk in the east end of Notre Dame street, within close proximity of the Montreal Harbor grain-elevators.

Though some authors, notably W. C. Muenscher ("Weeds", p. 344, 1936), have gone as far as to include Quebec in the American range of *EPILOBIUM HIRSUTUM* L., no specimen of the European willow-herb collected in the province was known to exist in the more important Canadian herbaria prior to 1940. In carrying out botanical investigations along the upper St. Lawrence river, to estimate to what extent the construction of a new dam would affect existing beach-lines, MARIE-VICTORIN & al., first came across the tall, hirsute species of *Epilobium*, new to their experience in the field.

Other large clumps were observed, in 1944, growing at a new station, Rivière Beaudette (Soulanges Co.), which lies on the opposite shore in the same upper St. Lawrence river district. A year later, the authors found a number of plants about a mile or so within the western limits of the city of Montreal. The station is near the Turcot stop on the Montreal Tramways Company line "Lachine No. 91", in the lowlands bordering the stream marking the bed and last vestige of the St. Pierre river of local historical prominence.

It seems probable that the plant, first introduced in the region of Lake Ontario, has come into Quebec along the route of migration followed by several native plants, such as *Allium canadense* and *Justicia americana* to name but two, via the shores of the St. Lawrence river.

Legal surveys of the type mentioned above, have recently given local botanists the opportunity to scrutinize more carefully a region which has always been looked upon as warranting little interest and, consequently, left quite neglected. Some justification for the former lack of enthusiasm may be found in noting that the intensive work carried out so far in the territory has yielded but little: an extra-estuarine locality for *SCIRPUS SMITHII* Gray, the western *ASTER ANGUSTUS* (Lindl.) T. & G. with a rather "indigenous" look to it, and the first record in America for *ALISMA GRAMINEUM* Gmelin ssp. *WAHLENBERGII* Holmberg ap.

Samuelsson (Svensk Bot. Tidskr. **16**: 41. 1922)¹, which according to SAMUELSSON², is known only from "Suecia media et in Fennia". Like *Butomus umbellatus* L., typical *Alisma gramineum* Gmelin is a pesky weed around Montreal. It, too, is now progressively invading the Richelieu river valley.

Another native of Europe, *CENTAUREA MONTANA* L., comes within the scope of this note. In July 1947, it was found growing in Vaudreuil (Vaudreuil Co.), in a well preserved maplewood far removed from any garden-site. Giving the discovery closer attention, the authors, searching through herbarium material, have turned up an earlier and hitherto unreported collection from the island of Orleans made by F. MICHEL, in 1933. The above stations permit listing this composite with entire, decurrent leaves as an additional item to Quebec's subsponaneous flora. The mountain bluet, as it is popularly called, is frequently cultivated in one or more of its numerous color-forms in flower gardens.

The final addition to report upon in this note is an Asiatic member of the *Cucurbitaceae*: *THLADIANTHA DUBIA* Bunge. Producing tubers, bearing heart-shaped leaves uniformly clothed with a rather stiff pubescence, and yellow campanulate unisexual flowers, for features more or less as salient as those listed above, the plant has suscitated marked interest among taxonomists since BUNGE first discovered it in waste places in the vicinity of Peking (Enum. Plant. Chin. Bor. 29. 1833). Its culture in the Jardin des Plantes de Paris dates to almost a century ago. With living plants at hand, Ch. NAUDIN (Annales des Sciences Naturelles, Série IV. **12**: 150. 1859) redescribed and ably illustrated the species, while W. H. HOOKER later contributed a fine colored plate which accompanies his lengthy description in *Curtis's Botanical Magazine* (XC. Tab. 5469. 1864).

The climber is not often grown by amateur gardeners according to L. H. BAILEY (*Hortus Second.* 728. 1941), but, when planted, has shown a marked tendency to escape from cultivation.

¹ *Alisma gramineum* Gmelin var. **Wahlenbergii** (Holmberg) Raymond & Kucyniak, stat. nov.—*Alisma gramineum* Gmel. ssp. *Wahlenbergii* Holmberg ap. Samuelsson, Svensk Bot. Tidskr. **16**: 41. 1922; Skandnaviens Flora H. I: 110. 1922; Bot. Notis. 1922, p. 207; Ark. för Bot. Band **24A**. (N: O 7): 45–46. Taf. 6. 1932; *A. Plantago* β. *graminifolia* Wahlenberg, Flora Upsaliensis. 122. 1820 et auct. suec. (non cet.).

² SAMUELSSON, G., *Die Arten der Gattung Alisma L.* Arkiv. för Botanik. Band **24A**. (N: O 7): 1–46. Mit 6 Tafeln. 1932.

A member of the Garden staff, Mr. Wilfrid MELOCHE, found the cucurbit in a vacant lot in Lachine, and brought it to the authors' attention who, in turn, established its identity. Three tubers were unearthed and transplanted to the Montreal Botanical Garden. In an inauspicious locality bordering a nursery-fence, the plants have fared well in spite of regular hoeing between rows and mechanical weeding by means of the "rototiller".

To find *Thladiantha dubia* thriving as a garden escape in a locality with winters as rigorous as ours tends to show that the species is hardier than most authors have so far assumed it to be.

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